

Fisheries and Aquatics Bulletin

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Fisheries: Aquatic and Endangered Resources (FAER) Program
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From the Assistant Program Coordinator's Desk

Invasive fishes are gaining greater importance for fishery biologists as exotic species appear in more and more of our rivers. With Asian carp finding their way up the Mississippi River, and Asian snakeheads being found ever more frequently in the Potomac River, new opportunities are developing for research about the life history, distribution, and competitive behavior of these exotic fishes.

In-depth information about snakeheads can now be found in the 2004 USGS Circular 1251 **Snakeheads (Pisces, Channidae) A Biological Synopsis and Risk Assessment**.

This recent publication discusses the potential range of the 29 species of snakeheads described in the circular:
http://fisc.er.usgs.gov/Snakehead_circ_1251/index.html



Northern Snakehead (Channa argus)
Photo: USGS, Florida Integrated Science Center



Northern Snakehead (Channa argus)
Photo: USGS, Florida Integrated Science Center

USGS fishery folks will be putting some teeth into invasive species control when they participate in the 2004 Snakehead Roundup, June 30 at Belle Haven Marina, Alexandria, Virginia. The event is being coordinated by a group of sportfishing, marine and recreational associations, and the Maryland Department of Natural Resources and the Virginia Department of Game and Inland Fisheries. For more information or to register for the tournament go to: <http://www.moaa.com/index.asp?bhcp=1>

More information on Asian snakeheads and other invasive fishes can be also found on the USGS Invasive Species Program webpage:
<http://biology.usgs.gov/invasive/CaseFiles/SnakeheadFish.htm>

Upcoming Seminar

US Fish and Wildlife Service Brown Bag Seminar at USGS Headquarters, Reston VA

The USFWS Science Advisor, Dan Ashe, and Deputy Science Advisor, Bill Knapp, invite USGS employees to view a video: "Science and the Service: A tradition of excellence" on Friday, July 16, 2004 at the USGS Headquarters. The video was produced by the National Conservation Training Center, Shepherdstown, WV. The video describes the scientific legacy of the USFWS and discusses future science undertakings. The seminar will be in a "Town Meeting and Discussion" format to encourage dialogue and exchange between the USFWS and USGS. For more information contact Donna Brewer, Acting Imperiled Species Specialist, 703-648-4059

Science Features

New National Wildlife Refuge Cooperative Research Program

A review panel recently selected three projects for funding of scientific research in the National Wildlife Refuge System (NWRS) under the new **Refuge Cooperative Research Program** (RCRP). Panel members included two Regional Refuge Chiefs from USFWS, a USGS Biological Resources Science Center Director, the Program Coordinator for the USGS Status and Trends of Biological Resources Program, and a representative from the

Wildlife Agencies (IAFWA). The RCRP's overall goal is to improve science-based management on National Wildlife refuges. The USGS is partnering with the NWRS to provide the science needed to support the 1999 USFWS *Fulfilling the Promise*, a commitment to administer a national network of lands and waters for the conservation, management, and restoration of fish, wildlife, plant resources and their habitats (<http://midwest.fws.gov/InsideR3/promises.pdf>). The 2004-2006 Request for Proposals concerned adaptive management practices and the inventory and monitoring needs of the NWRS. The following projects were selected.

1. "Timing of impoundment drawdowns and impact on waterbird, invertebrate, and vegetation communities within managed wetlands". BRD Principal Contact: Dr. Michael C. Runge, Patuxent Wildlife Research Center.
2. "Interactions of prescribed burning, soils, and water on nutrient dynamics, vegetation, aquatic invertebrates, and wetland birds in managed emergent marshes". BRD Principal Contact: Dr. Jane E. Austin, Northern Prairie Wildlife Research Center.
3. "NWRS participation in a National Marsh Bird Monitoring Program". BRD Principal Contact: Dr. Courtney J. Conway, Assistant Unit Leader, Arizona Cooperative Fish and Wildlife Research Unit.

For RCRP information contact Dan James, the Assistant S&T Program Coordinator, Daniel L James @usgs.gov

USGS scientists co-author state-of-the-science publication on freshwater mussels

The May 2004 issue of *BioScience* contains an article: **Changing perspectives on pearly mussels, North America's most imperiled animals.** *BioScience* 54:429-439. Written by Dr. David Strayer - Cornell University and co-authors, including four USGS scientists: Dr. Teresa Newton - Upper Midwest Environmental Sciences Center, Dr. Tim King - Leetown Science Center, Dr. James Layzer - Tennessee Cooperative Research Unit, and Jerrine Nichols - Great Lakes Science Center, this publication was a product of a science planning meeting organized by the Upper Midwest Environmental Sciences Center in October 2002 to gather input regarding their project on 'Development of landscape models for the protection and conservation of native freshwater mussels in large rivers.



Fragile papershell mussel
Photo: Upper Midwest Environmental Science Center

Native freshwater mussels are among the most fascinating, widespread, and endangered animals in freshwaters. They play critical roles in freshwater ecosystems and are economically important for their shells and pearls. Recent research, fueled by concern over

widespread extinctions and population declines, has provided valuable and even astonishing insights into the ecology, biology, and conservation needs of these animals. This journal article reviews recent progress in freshwater mussel research, identifies promising directions for future research, and draws general lessons that may apply to other organisms.

Citation:

Strayer, D.L., J.A. Downing, W.R. Haag, T.L. King, J.B. Layzer, T.J. Newton, and S.J. Nichols. 2004.

Changing perspectives on pearly mussels, North America's most imperiled animals. *BioScience* 54:429-439.

Related information can be found at:
http://midwest.fws.gov/mussel/document/s/mct_2002_status_report.pdf

Agricultural ponds help sustain amphibian populations

USGS Researchers at the Upper Midwest Environmental Sciences Center, working with scientists at the University of Wisconsin, La Crosse, WI have described an interesting interface between agriculture and amphibian populations. In their recent publication in *Ecological Applications*, the team explained the relationship between different types of ponds and successful management of amphibian populations where natural wetlands are rare. Note the recommendation to avoid the introduction of fish.

Citation:

Knutson, M.G., W.B. Richardson, D.M. Reineke, B.R. Gray, J.R. Parmelee, and S.E. Weick. 2004. **Agricultural ponds support amphibian populations.** *Ecological Applications*, 14(3): pp. 669-684.

EPA releases ruling on aquaculture effluents

Best Management Practices will be a requirement of the final EPA decision on aquaculture effluents. Check out the web for a preview and factsheet for the ruling: [Pre-publication copy of the Federal Register Notice / Final Rule](#) and [Fact Sheet](#)

Strategic Plan for the National Biological Information Infrastructure (NBII) Fisheries and Aquatic Resources (FAR) Node is online

The Strategic Plan (2004-2009) for the Fisheries and Aquatic Resources Node of NBII can be accessed at: <http://far.nbii.gov/documents/FinalFARStrategicPlan.pdf>



Pallid sturgeon
Photo: USGS, Columbia Environmental Research Center

New Pallid Sturgeon Factsheet

A new factsheet on pallid sturgeon research has been released by the USGS Columbia Environmental Research Center and is available at: <http://infolink.cr.usgs.gov/Science/BenthicFish/index.htm>

Meetings

The 134th Annual American Fisheries Society Meeting

will be held in Madison, Wisconsin August 22-26, 2004. The meeting is co-sponsored by the Wisconsin Department of Natural Resources. Early registration ends July 23. For conference information see:

<http://www.afs2004madison.org/index.shtml> Of special interest to fishery scientists is the **AFS Science**

Workshop: Working Group on Healthy Fish Habitats (August 22) an opportunity to help establish national scientific criteria for measurement of aquatic habitat health throughout North America. The USFWS has a website dedicated to the National Fish Habitat Initiative. <http://fisheries.fws.gov/CAF/Habitat.htm>

USGS All-Hands Meeting at 134th Annual American Fisheries Society Meeting

For those in attendance at the AFS Annual Meeting, there will be an all-hands meeting for USGS attendees on Tuesday, August 24th from 5:30 to 6:30 PM in the Monona Terrace Room. All USGSers are invited to attend to enjoy refreshments, mingle with peers and hear Associate Director Haseltine's presentation on the current and future status of the Biological Resources Fisheries: Aquatic and Endangered Resources Program and Cooperative Research Units.

2004 USGS Mercury Workshop

August 17 -18, 2004

USGS National Center, Reston, Virginia

The U.S. Geological Survey, Eastern Region is sponsoring a two-day workshop on mercury in the environment focusing on the science of mercury as it relates to DOI resource management issues in the Eastern Region (east of the Mississippi River). Issues include the influence of ecosystem setting and type, of land and air management practices, of mercury source issues, and of impacts to living resources. DOI land and resource managers who interface between land-management and mercury-contamination concerns, and mercury researchers from all DOI agencies and other relevant federal science agencies involved in mercury study or regulation (e.g., NOAA, USEPA) are encouraged to attend.

For further information: Registration and information on the 2004 Mercury Workshop is available at <http://westnilemaps.usgs.gov/mercuryworkshop/>

VI International Congress on the Biology of Fish is taking place in Manaus, Amazonus, Brazil, August 1-5, 2004 at the Tropical Hotel Manaus Conference Center. The National Institute for Research in the Amazon - INPA and the American Fisheries Society (AFS - Physiology Section) are pleased to invite you to participate. <http://www.fishbiologycongress.com.br/information.htm>



Grand Canyon and Colorado River

Photo: USGS, Grand Canyon Monitoring & Research Center

Biological Resources Staff Updates

While we await the July 26, 2004 arrival of our new Chief Scientist for Biology, [Dr. Robert Szaro](#), we have enjoyed the on-site participation of a number of Acting Chief Scientists from across BRD.

Dr. Jeffrey Lovich , Chief of the Grand Canyon Monitoring and Research Center (GCMRC) serves as Acting Chief Scientist

Jeff served as the ACS during the period June 3-25, 2004. As the ACS, Jeff was exposed to HQ activities and insights. He shared a valuable field perspective with the HQ staff.

At GCMRC Jeff oversees the development of long-term research and monitoring projects that evaluate Glen Canyon Dam operations on the biological, physical, cultural and recreational resources of the Colorado River ecosystem. One of the four research stations of the Southwest Biological Science Center (SBSC),

science activities are directed toward adaptive management needs in the Colorado River basin of for land managers, the US Fish and Wildlife Service, national parks, power operators, Native and American Tribes.

A native of Alexandria, Virginia, Jeff received his B.S. and M.S. degrees in Biology from George Mason University in 1982 and 1984, respectively, and a Ph.D. in Ecology from the University of Georgia, Institute of Ecology in 1990. Jeff, a self-described an eclectic ecologist, has worked for the BLM, NBS, and USGS- conducting research on fish and turtles in rivers of the eastern United States and the Mojave Desert of California. Recently hornswoggled into a management position at GCMRC, he was subsequently surprised that he liked the challenge. Jeff has published over 70 scientific papers and two books including, "Turtles of the United States and Canada," published by the Smithsonian Institution Press in 1994. Jeff discovered, described and named 3 of the world's 290 or so turtle species, two of which occur in the United States. However science is just a hobby, he'd rather be spending time with his wife and kids, fishing, hunting, or driving one of his 1964 GTO's.



For information on SBSC research in the Grand Canyon see:

<http://sbsc.wr.usgs.gov/main/about.htm>



Three age classes of Atlantic salmon parr
Photo: USGS, Conte Anadromous Fish Research Center

Cara Campbell of the Leetown Science Center joins the USGS Reston staff for two month detail

Cara Campbell, a Research Fishery Biologist at the Leetown Science Center's Northern Appalachian Research Laboratory in Wellsboro, Pennsylvania, recently began a 60-day detail with the Review and Coordination Team in the Office of the Chief Scientist for Biology. Since 1991, Cara has worked in the US Fish and Wildlife Service, the National Marine Fisheries Service, and the US Geological Survey, concentrating primarily on large-scale salmonid life-history research. Cara received her MS from the University of Massachusetts in 1999, where her master's thesis focused on the distribution, abundance, and growth of juvenile Atlantic salmon within the Connecticut River. Recently, Cara has been the principal investigator on the Fisheries and Aquatic Resources (FAR) node of the National Biological Information Infrastructure (NBII) and worked with FAER Program staff to develop the FAER web site. While in Reston, Cara will be working on Research Grade Evaluations, Program reviews, science policy, customer surveys, Basis+, and Government Performance and Results Act reporting.

Donna Brewer (US Fish and Wildlife Service) is on a two month detail with USGS as Imperiled Species Specialist

Donna has been involved with environmental conservation and endangered species issues since 1976 and has held positions with the University of Southern California, Bureau of Land Management, Calif. Dept of Fish & Game, Minerals Management Service, National Marine Fisheries Service, Washington Headquarters Office of Protected Resources as an Endangered Species specialist.

Donna has only recently resumed her career with the government following a six year absence while she and her husband, completed a circumnavigation of the world in their 44-foot sailboat. After 46,000 sea miles, 38 countries, 743 anchorages, and 232 islands, Donna is eager to share her new perspective on the diversity and distribution of plants and animals with students at the National Conservation Training Center. She currently coordinates several NCTC (see <http://training.fws.gov/>) courses on conservation and endangered species including Recovery Planning, Habitat Conservation Planning, Scientific Principles and Tools, Principles of Modeling, and teaches Ecological Services Basic Training. Donna also works closely with Washington DC staff on national workshops and is the design team leader for two new courses: Advanced Interagency Consultation and Critical Thinking. She is currently on a temporary detail to U.S. Geological Survey, Biological Resources Division in Reston, VA as their Imperiled Species

Specialist. She lives just outside of Shepherdstown with her husband, Gary, a marine scientist with the U.S. Geological Survey. Donna has B.A. in Biological Sciences from University of California, Irvine and a M.S. from California State University at Long Beach.

Donna is completing the one year detail of Monica Tomosy who recently left the USFWS to join USGS as the Chief of the Bird Banding Laboratory at Patuxent Wildlife Research Center

<http://www.pwrc.usgs.gov/>

Steve Hilburger leaves Research Grade Evaluation Program Specialist position to join the Wildlife, Terrestrial and Endangered Resources Program

Steve, known to BRD fishery scientists through the RGE office, has transferred to the position of Program Analyst in the Wildlife Program. He has served as a Peace Corps volunteer in Swaziland, teaching high school sciences and working in a small nature reserve. He then spent five years in the Peace Corps Africa Regional Office in Washington, DC. While working for Peace Corps, he coordinated grass-roots level volunteer programs in Lesotho, Namibia, Zambia, and Malawi. Steve holds a BS in Environmental and Forest Biology from SUNY. We look forward to working with Steve on imperiled species and science support activities in fisheries and wildlife.

Job Announcement

Fishery Biologist, GS-0482-12
Announcement No.: WR-2004-0268
Location of Position: Seattle, WA
Salary: \$60,897 **Close Date:** 7/12/04

This position is for a Fishery Biologist in the Ecology Section (ES) of the Western Fisheries Research Center (WFRC), Biological Resources Discipline of the U.S. Geological Survey, Seattle, WA. Major Duties: The incumbent coordinates and leads Ecology research programs and provides technical assistance to the U.S. Fish and Wildlife Service (USFWS) and National Parks Service (NPS). Apply through OARS, the U.S. Geological Survey, Online Automated Recruitment System or contact: DOI, USGS Office of Personnel
3020 State University Drive East
Modoc Hall, Suite 2001
Sacramento, CA 95819
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USGS scientist Lynn Bartsch with carp

Photo: USGS, Upper Midwest Environmental Science Center

Are You Ready to Adopt?

A fish, that is. Missouri River fish can be adopted through USGS and a team of agencies, non-governmental organizations and the news media, all interested and dedicated to understanding the biology of Montana's native fish. Name the fish, follow its river movements, and learn more about fish biology in this nation's incredible river. This month marks the third year for the adoption program, providing many schools and individuals the opportunity to join the fun, tracking and learning about sturgeon, paddlefish, and blue sucker. For details on the cooperative fish research project, in addition to specifics on adopting a fish, go to

<http://www.walleyesunlimited.com/adopt-fish/home.html> or contact Marcia Nelson mknelson@usgs.gov at <http://www.cerc.usgs.gov/>

Share Your Expertise through the Fisheries and Aquatics Bulletin

Communicate your fisheries and aquatic resources items of interest to gain national exposure. Thanks to all those who contributed material to this issue of the FAB. To send articles and photographs:

Contact: robin_schrock@usgs.gov

FAER Asst. Program Coordinator

or Jim Preacher, FAER Program

Coordinator at jpreacher@usgs.gov.

<http://biology.usgs.gov/farp/index.htm>